

### **ABSTRACT OF THE DISCLOSURE**

In an internal combustion engine in which fuel injection valves are arranged upstream from and downstream from the throttle valve, respectively, the response of the accelerated increase in quantity and correction will be improved. The total injection quantity determination unit determines a total quantity of fuel to be injected from each fuel injection valve. The injection rate determination unit determines an injection rate of the upstream injection valve. The injection quantity correction unit includes an accelerated increase in quantity and correction unit, and during acceleration, increases and corrects only the injection quantity of the downstream injection valve during acceleration. The injection quantity determination unit determines the injection quantity of the upstream injection valve on the basis of the injection rate and the total injection quantity, and determines the injection quantity of the downstream injection valve on the basis of the upstream injection quantity and the total injection quantity.